

AMENDMENTS TO THE DRAWINGS:

Attached herewith are three (3) sheets of corrected drawings to be substituted for the corresponding drawing sheets presently on file in the above-identified application. The attached replacement sheets of drawings include changes to Figures 2, 9 and 24. The changes incorporate the changes required in the Office Action dated January 25, 2005, and are not believed to add new matter to the original disclosure. More specifically, the changes are as follows:

Fig. 2, delete "302," "304," "342" and "367".

Fig. 9, delete "506," "507," "508" and "509".

Fig. 24, delete "1505".

Attachments: Replacement Sheets

REMARKS

This application has been reviewed in light of the Office Action dated January 25, 2005. Claims 16-29 are presented for examination, of which Claims 16, 19, 22 and 26 are in independent form. Claims 1-15 have been canceled, without prejudice or disclaimer of subject matter. Claims 16-29 have been added to provide Applicant with a more complete scope of protection. The canceled claims will not be further addressed herein.

The specification has been amended to conform the Summary of Invention section to the amended claims.

The Examiner objected to the drawings on the grounds noted on page 2 of the Office Action.

Applicant has carefully reviewed and amended Figures 2, 9 and 24 to overcome the noted objection. Specifically, Applicant deleted the references to elements 302, 304, 342 and 367 in Figure 2; elements 506, 507, 508 and 509 in Figure 9; and element 1505 in Figure 24. It is believed that any informality in the drawings has been remedied, and the withdrawal of this objection is therefore respectfully requested.

Claims 1-2, 5-6, 8, 9-10, 12 and 14 were rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,809,834 (Sato). Claims 3-4 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Sato in view of U.S. Patent No. 6,330,374 (Yamaguchi). Claims 7, 11, 13 and 15 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Sato in view of U.S. Patent No. 5,625,466 (Nakajima).

Cancellation of Claims 1-15 renders their rejections moot, but Applicant submits the following comments regarding the patentability of new Claims 16-29 over these cited references.

Claim 16 is directed to a printer including a control unit having a first memory for storing image data generated based on print data received from an external apparatus. The printer also includes an engine unit including a second memory for storing the image data received from the control unit and a print engine for printing the image data stored in the second memory. The control unit includes a transfer unit for transferring the image data read from the first memory to the second memory. The transfer unit includes a third memory for storing the image data read from the first memory, and reads rotated image data from the third memory and transfers the rotated image data to the second memory.

Among other important features of Claim 16 is that the control unit includes a transfer unit for transferring the image data read from the first memory to the second memory, and that the transfer unit includes a third memory for storing the image data read from the first memory, and reads rotated image data from the third memory and transfers the rotated image data to the second memory. By virtue of the structure recited in Claim 16, after image data is read from the first memory, image data generated based on the next print data from the external apparatus can be stored using the first memory, which is now available.

Sato, Yamaguchi and Nakajima, alone or in combination, are not seen to teach or suggest the apparatus as defined by Claim 16, particularly with respect to use of a third memory for storing image data read from the first memory.

Sato relates to an image forming apparatus including an image forming section, a page memory for storing image data to be transferred to the image forming section, and a DMA

controller. The DMA controller continuously transfers a plurality of words of image data with the same row address from the page memory to the image forming section. Sato discusses the use of the DMA controller to transfer image data from the page memory to a vertical/horizontal conversion, which outputs vertical/horizontal converted image data. The DMA controller returns the converted image data to the same addresses of the page memory by DMA transfer. Subsequently, the DMA controller transfers the converted image data from the page memory to a plotter in a rotated condition.

Since Sato discusses reading the image data from the page memory and, after rotation processing, sending the rotated image back to the page memory, the page memory of Sato cannot be re-used until the resulting image has been transferred from the page memory to the plotter. Nothing has been found in Sato that would teach or suggest a transfer unit that “includes a third memory for storing the image data read from the first memory, and reads rotated image data from the third memory and transfers the rotated image data to the second memory,” as recited in Claim 16.

The disclosures of Yamaguchi and Nakajima do not remedy the deficiencies of Sato.

Yamaguchi relates to a digital copier and method for processing images in which the images are manipulated and processed utilizing smaller blocks of the image. Yamaguchi discusses a device 96 for reading image data written to a buffer 98 from a scan unit 24, and writing processed data to a DMA buffer 100. The processed data, which may be rotated or flipped data, is transferred to a memory 16 over a bus 44 using a DMA operation. In order to print data, the image data is read from the memory 16 and written to a DMA buffer 80. The image is processed as needed by a device 92, written to a buffer 94 and transferred to a plot unit

26 for printing. Nothing has been found in Yamaguchi that would teach or suggest a transfer unit that "includes a third memory for storing the image data read from the first memory, and reads rotated image data from the third memory and transfers the rotated image data to the second memory," as recited in Claim 16.

Nakajima relates to an image forming apparatus that detects the size and direction of a document on a platen, and executes image processing depending on the detected direction. Nothing in Nakajima has been found to teach or suggest a transfer unit that "includes a third memory for storing the image data read from the first memory, and reads rotated image data from the third memory and transfers the rotated image data to the second memory," as recited in Claim 16.

Therefore, even if Sato and Yamaguchi or Sato and Nakajima were combined in the manner suggested by the Examiner, assuming such a combination would even be permissible, the result would not meet the terms of Claim 16.

A review of the other art of record has failed to reveal anything which, in Applicant's opinion, would remedy the deficiencies of the art discussed above, as a reference against Claim 16.

Independent Claim 22 recites features similar to those discussed above with respect to Claim 16 and therefore is believed to be patentable over the prior art of Sato, Yamaguchi and Nakajima for the reasons discussed above.

Independent Claims 19 and 26 are directed to methods in accordance with Claims 16 and 22, respectively. Applicant submits that the foregoing remarks in support of Claims 16 and 22 apply equally to Claims 19 and 26. Therefore, Applicant submits that

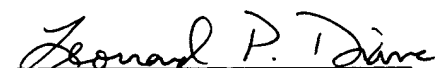
independent Claims 19 and 26 are allowable and respectfully requests same.

The other pending claims in this application are each dependent from one or another of the independent claims discussed above and are therefore believed patentable for the same reasons. Because each dependent claim is also deemed to define an additional aspect of the invention, however, the individual reconsideration of each on its own merits is respectfully requested.

In view of the foregoing amendments and remarks, the entire application is believed to be in condition for allowance, and such action is respectfully requested at the Examiner's earliest convenience.

Applicant's undersigned attorney may be reached in our New York Office by telephone at (212) 218-2100. All correspondence should continue to be directed to our address listed below.

Respectfully submitted,


Attorney for Applicant
Leonard P. Diana
Registration No. 29,296

FITZPATRICK, CELLA, HARPER & SCINTO
30 Rockefeller Plaza
New York, New York 10112-3801
Facsimile: (212) 218-2200